

AMENDMENT UNDER 37 C.F.R. §1.116
US APPLICATION NO. 10/664,856
ATTORNEY DOCKET NO. Q76501

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. *(Previously Presented)* An operational amplifier arrangement comprising a first arrangement input terminal to which an input signal is supplied and a first arrangement output terminal, said operational amplifier arrangement further comprising:

 a non-linear amplifier having a pair of input terminals, one of which is coupled to said first arrangement input terminal, said non-linear amplifier further comprising an output terminal,

 a linear amplifier having a pair of input terminals, one of which is coupled to said first arrangement input terminal, said linear amplifier further comprising an output terminal,

 whereby the output terminal of said non-linear amplifier is coupled to the output terminal of said linear amplifier via a first series impedance,

 whereby the output terminal of said linear amplifier is coupled to the first arrangement output terminal via a first terminating impedance,

 and whereby the operational amplifier arrangement further comprises a first active back termination arrangement coupled between the first arrangement output terminal and either one of said pair of input terminals of said linear amplifier.

2. *(Previously Presented)* The operational amplifier arrangement according to claim 1, wherein said non-linear amplifier receives a first supply voltage from a first power supply, while said linear amplifier receives a second supply voltage from a second power supply, wherein the second supply voltage is greater than the first supply voltage.

3. *(Previously Presented)* The operational amplifier arrangement according to claim 1, wherein operational amplifier arrangement further comprises a second arrangement input terminal and a second arrangement output terminal, said input signal being a differential input signal applied between said first arrangement input terminal and said second arrangement input terminal, said non-linear amplifier comprising a second output terminal coupled to said second arrangement output terminal via a second series impedance, said linear amplifier comprising a second output terminal coupled to the second arrangement output terminal via a second terminating impedance, said operational amplifier arrangement further comprising a second active back termination arrangement coupled between said second arrangement output terminal and the other one of said pair of input terminals of said linear amplifier.

4. *(Previously Presented)* The operational amplifier arrangement according to claim 3, wherein said first series impedance is substantially equal to said second series impedance, said first terminating impedance is substantially equal to said second terminating impedance and said first active back termination arrangement is substantially equal to said second active back termination arrangement.

5. (*Previously Presented*) An operational amplifier arrangement comprising a pair of arrangement input terminals and a pair of arrangement output terminals, said operational amplifier arrangement further comprising;

first and second non-linear amplifiers coupled between said arrangement input terminals and said arrangement output terminals,

first and second linear amplifiers coupled between said arrangement input terminals and said arrangement output terminals,

whereby respective output terminals of said non-linear amplifiers are coupled to respective output terminals of said linear amplifiers via respective series impedances,

whereby respective output terminals of said linear amplifiers are coupled to respective arrangement output terminals via respective terminating impedances,

and whereby the operational amplifier arrangement further includes a first pair of active back termination arrangements coupled between respective arrangement output terminals and either one of said pair of input terminals of either pair of linear amplifiers.

6. (*Previously Presented*) The operational amplifier arrangement according to claim 5, wherein:

said first and second non-linear amplifiers receive a first power supply voltage, and

said first and second linear amplifiers receive a second power supply voltage, wherein the second power supply voltage is greater than the first power supply voltage.

7. *(Previously Presented)* The operational amplifier according to claim 5, wherein said respective series impedances have substantially equal resistance values, said first and said second non-linear amplifiers are substantially identical, said first and said second linear amplifiers are substantially identical, said respective terminating impedances are substantially identical, and said active back termination arrangements of said first pair of active back termination arrangements are substantially identical.

8. *(Previously Presented)* The operational amplifier arrangement according to claim 5, wherein said operational amplifier arrangement comprises a second pair of active back terminating arrangements coupled between the respective output terminals of said first and said second linear amplifiers and either input terminals of either said first or said second linear amplifiers.

9. *(Previously Presented)* The operational amplifier arrangement according to claim 8, wherein the active back terminating arrangements of said second pair of active back terminating arrangements are substantially identical.

10. (*Currently Amended*) The operational amplifier arrangement according to claim 1, wherein the gain of a first branch between the arrangement input terminal and the arrangement output terminal that comprises said linear amplifier and said first terminating impedance equals the gain of a second branch between the arrangement input terminal and the arrangement output terminal that comprises said non-linear ~~amplifier~~amplifiers, said first series impedance and said first terminating impedance.

11. (*Currently Amended*) The operational amplifier arrangement according to claim 5[[10]], wherein an output impedance between one of said arrangement output terminals and one of said arrangement input terminals via said branch equals an output impedance between said one arrangement output terminal and said one arrangement input terminal via said parallel branch.

12. (*Previously Presented*) The operational amplifier arrangement according to claim 5, wherein the sum of said respective series impedances and said respective terminating impedances in series with said respective series impedances is equal to a series load impedance.

13. (*Previously Presented*) The operational amplifier arrangement according to claim 8, wherein the sum of said respective series impedances and said respective terminating impedances in series with said respective series impedances is lower than a series load impedance.